GEOSOLV DESIGN > BUILD

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Grand Condo - Phase II
Cambridge, Ontario

Challenge

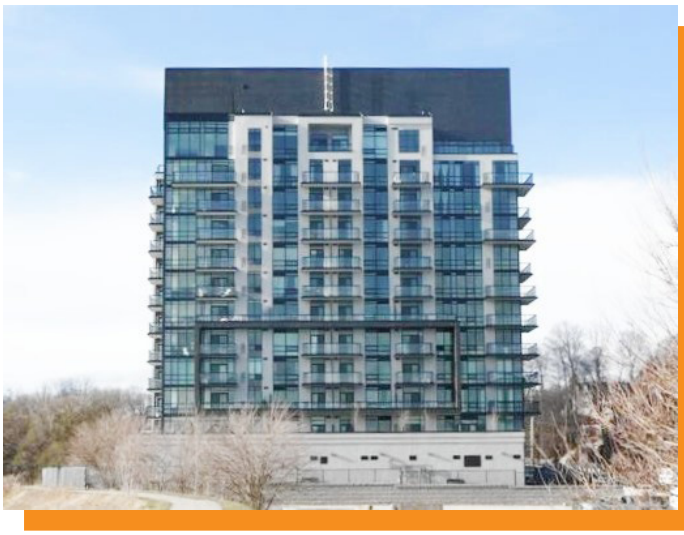
The 12-storey Phase II of The Grand Condominium on the bank of the Grand River had unique underground challenges. With high ground water conditions and very loose sandy silt to silt soils with organics to depths of 30 feet, the geotechnical engineer recommended that the structure be founded on a deep foundation system. Installation difficulties, cost overruns, and schedule delays during installation of a helical pile solution on Phase I of the same development created serious concern for the project schedule and cost for Phase II.

Solution

The project team required a cost-effective foundation solution that could be installed with minimal delays to the project schedule. Ultimately, through discussions with GeoSolv, the Geopier GeoConcrete® Column system was selected for its cost-effectiveness, speed of installation, and ability to provide for high- capacity standard footing construction.

Outcome

The Geopier GeoConcrete system (GCC) was designed to provide standard spread footings at 450 kPa (SLS). Installation of the Geopier elements was conducted rapidly within the basement excavation at a rate of over 50 GeoConcrete elements per day – significantly faster than helical piles. Full-scale load testing demonstrated less than 4.5 mm (0.18 in.) of deflection at the maximum design load.



The Grand Condominium rests on high capacity spread footings on ground improvement at the basement level in soils that had SPT-N Values of 0 to 2 for over 30 feet in depth

Project Team

General Contractor
Reid & Deleye Construction

Geotechnical Engineer
CVD Engineering

Structural Engineer
Stephenson Engineering

Owner
Haastown Group

Ground Improvement - Rigid Inclusions - Piling Systems - Slope Stability - Ground Reinforcement

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